

DMS-6250, Geogrid-fabric Composite for Pavements

Description

Effective Date: March 2000 – May 2003.

This specification provides for geogrid-fabric composite applications in pavement overlay to control surface moisture infiltration and retard reflective cracking. This specification shall govern for the materials, composition, quality, sampling, testing, quality monitoring and compliance of a geogrid-fabric composite pavement reinforcing material.

Materials

The geogrid-fabric composite shall consist of a planar structure formed by a regular network of integrally connected polymeric tensile elements or glass fiber strands with apertures and a non-woven fabric constructed exclusively of synthetic thermoplastic. The fibers may be oriented in the fabric in either a random or an aligned orientation and the fiber may be either continuous or discontinuous throughout the fabric. The fabric shall be mildew resistant, rot-proof and shall be satisfactory for use with asphalt cements at temperatures up to 163 °C (325 °F).

The geogrid-fabric composite supplied shall meet the following requirements when sampled and tested in accordance with the methods specified.

Geogrid-fabric Composite			
Physical Property	Test Method	Requirements	
		Minimum	Maximum
Asphalt Retention, L/m ² (gal/yd ²)	Test Method “Tex-616-J, Construction Fabrics”	0.68 (0.15)	2.72 (0.60)
Tensile Modulus @ 2% Elongation* N/m (lb./ft)	ASTM D 4595, modified	905,000 (62,000)	
*Note: Determined as a secant modulus without offset allowances.			

Prequalification Requirements

Request for Prequalification

Manufacturers/suppliers desiring to prequalify their product under the Quality Monitoring Program (QMP), shall submit a letter to the Director of the Materials & Pavements Section, Construction Division (CP51), Texas Department of Transportation (TxDOT), 125 E. 11th Street, Austin, Texas 78701-2483. The letter shall include a certified test report from an independent laboratory complying with the requirements herein.

Requirements for Prequalification

Manufacturers/suppliers requesting QMP prequalification shall meet the following requirements:

- ◆ A minimum of one (1) sample shall be tested for specification compliance by an independent laboratory. Test results shall be included in prequalification submittal.
- ◆ Geogrid-fabric composite shall be tested in accordance with the requirements stated herein and shall meet the minimum requirements.
- ◆ CST/M&P reserves the right to inspect the independent laboratory to ensure that all criteria for equipment and procedure compliance is met.
- ◆ The manufacturer/supplier shall submit a minimum of three (3) different roll samples to CST/M&P for evaluation.
- ◆ After evaluation, approved material will be placed in a prequalified list, which shall be maintained by and available from CST/M&P.
- ◆ The manufacturer/supplier shall submit annual samples for verification to CST/M&P.

Quality Control Requirements

The manufacturer/supplier shall bear the responsibility of complying with the following requirements for quality control of their material:

- ◆ The manufacturer/supplier shall maintain a complete record of all test reports, which shall be readily available to any TxDOT representative. These records shall be maintained for the previous and current calendar year.
- ◆ Frequency of testing by manufacturer/supplier shall be a minimum of one (1) in every state lot. The state lot shall consist of 16,722 m² (20,000 yds²).
- ◆ It shall be the responsibility of the manufacturer/supplier to sample and test the material under the QMP and to maintain appropriate records.
 - These records shall contain every test performed on the prequalified material by the producer or the independent lab. These records shall be maintained for the previous and current calendar year.
 - A monthly activity report shall be submitted to CST/M&P reflecting a test report for every 16,722 m² (20,000 yds²) of the prequalified material produced by the manufacturer.

Disqualification

Failure of any material or failure by the producer to comply with these requirements may result in the removal of the manufacturer/supplier from the list of QMP prequalified list.

If a producer is removed from the prequalified list, they will not be allowed to supply any material to TxDOT for a period of 30 days, or as determined by the Director of CST/M&P. After this time has expired, the producer must re-qualify to regain QMP status.

A manufacturer/supplier that is granted QMP prequalified status shall remain on the list indefinitely unless one (1) of the following conditions occurs:

- ◆ Material shipped to TxDOT fails to meet the requirements stated in this specification.
- ◆ The manufacturer/supplier fails to properly perform and report quality control tests to CST/M&P.
- ◆ The manufacturer/supplier has not provided TxDOT with any material for a period of twelve months.

Sampling

TxDOT reserves the right to periodically sample and test materials from the following locations:

- ◆ manufacturing plant
- ◆ project site, and/or
- ◆ warehouse, where material is stored.

TxDOT representatives shall have access to the material location site(s).

CST/M&P will conduct random audits, sampling, and testing to ensure that all procedures and material quality conform to this specification.

Re-qualification

If a manufacturer/supplier is disqualified from the QMP, the disqualification period must elapse before a producer is eligible to resubmit their materials for re-qualification procedures.

After receiving the request for re-qualification, all requirements for prequalification under 'Prequalification Requirements' must be met.

Identification

All shipments must be identified by tickets or labels securely affixed to each roll. This ticket or label must list a minimum of the following information:

- ◆ Name of manufacturer or supplier
- ◆ Brand name and style of the product
- ◆ Manufacturer's lot number or control number
- ◆ Date of manufacture
- ◆ Roll width in millimeters (inches) or meter (yard)

- ◆ Roll length in meters (yards).

NOTE: All manufacturers/suppliers are notified that any material delivered to a project shall be accompanied by a certification of compliance. Materials shall be on the QMP list. Manufacturer/suppliers failing to comply with this requirement will not be accepted.

Packaging Requirements

The geogrid-fabric composite shall be packaged in rolls of the length and width required by specification, on the plans, in the purchase order awarded by the state or as directed by the Engineer. Each roll shall be packaged individually and protected from damage due to ultraviolet light and moisture by either wrappers or inside storage.